

Table S2. Major ions results of October 2011 for the Mitchell River, its upper and low catchment tributaries and groundwater. \*Tributary sampled far upstream of the confluence with the Mitchell River (sampled at the confluence otherwise).

River/Creek	ID	Dist. downstream (km)	Sampling (date + time)		Lat.	Lon.	Na <sup>+</sup>	Ca <sup>2+</sup>	K <sup>+</sup>	Mg <sup>+</sup>	Si <sup>2+</sup>	Cl <sup>-</sup>	HCO <sub>3</sub> <sup>-</sup>	SO <sub>4</sub> <sup>2-</sup>
							mg L <sup>-1</sup>							
Rifle Ck.	Rifle	0	18.10.2011	08:20	-16.6648	145.3268	7.21	3.09	1.83	1.06	8.26	13	14.94	2.1
Mitchell Rv.	M1	25.3	18.10.2011	12:20	-16.6013	145.1741	8.72	8.56	1.45	1.73	8.02	13	19.05	1.1
Mary Ck.	Mary	26.5	18.10.2011	10:55	-16.5838	145.1834	6.62	3.90	1.06	0.59	5.91	11	9.12	1.4
Mitchell Rv.	M2	28.0	18.10.2011	10:20	-16.5864	145.1579	8.76	10.70	1.30	1.36	7.48	13	17.75	1.2
McLeod Ck.	McLeod	56.0	18.10.2011	09:00	-16.4968	145.0031	6.42	1.39	1.21	0.71	7.13	11	9.77	1.1
Mitchell Rv.	60	57.0	17.10.2011	15:30	-16.5067	144.931	7.46	5.26	1.27	0.99	7.03	13	13.74	1.1
	59	62.6	17.10.2011	15:25	-16.5347	144.9225	7.82	3.65	1.32	1.22	6.67	14	15.81	1.0
	58	68.1	17.10.2011	15:20	-16.5607	144.8904	7.94	3.42	1.24	1.24	6.88	13	16.82	0.93
	57	73.5	17.10.2011	15:15	-16.5810	144.8547	8.14	2.37	1.26	1.24	6.95	13	17.31	0.92
	56	79.9	17.10.2011	15:08	-16.5771	144.8148	8.31	2.74	1.31	1.37	6.67	14	18.26	0.96
	55	83.1	17.10.2011	15:04	-16.5849	144.7869	8.28	2.29	1.32	1.37	6.61	14	18.13	0.94
	54	87.7	17.10.2011	15:00	-16.5634	144.7625	8.27	3.34	1.26	1.36	6.51	14	18.56	0.91
	53	91.5	17.10.2011	14:57	-16.5778	144.7308	22.4	5.48	2.04	3.95	3.46	35	47.71	0.56
	52	95.5	17.10.2011	14:53	-16.5760	144.6957	8.48	2.50	1.31	1.41	6.34	14	17.51	0.90
	51	102.5	17.10.2011	14:47	-16.6116	144.665	8.44	1.98	1.32	1.41	6.20	14	17.87	0.89
50	105.6	17.10.2011	14:43	-16.6273	144.6467	8.32	1.88	1.31	1.41	6.21	14	18.03	0.88	
Hodgkinson Rv.	49	110.2	17.10.2011	14:38	-16.6663	144.6515	37.7	9.64	1.91	9.85	0.05	32	128.22	2.5
Mitchell Rv.	48	111.1	17.10.2011	14:34	-16.6749	144.6378	8.95	2.74	1.38	1.51	6.16	14	19.99	0.86
	47	112.4	17.10.2011	14:31	-16.6796	144.6284	8.31	3.38	1.32	1.42	6.09	14	18.28	0.88
	46	118.6	17.10.2011	14:27	-16.6311	144.6047	8.67	5.36	1.35	1.46	6.07	14	19.32	0.84
	45	123.8	17.10.2011	14:23	-16.6221	144.5801	8.60	7.33	1.38	1.55	5.75	14	20.21	0.92
	44	128.6	17.10.2011	14:18	-16.6141	144.5420	8.34	6.74	1.33	1.55	5.53	14	18.80	1.00
	43	134.6	17.10.2011	14:13	-16.5908	144.4982	8.58	5.68	1.34	1.53	5.46	14	19.35	1.00
	42	139.8	17.10.2011	14:09	-16.5511	144.4814	9.21	6.75	1.72	2.26	4.11	14	25.07	1.5

	<b>41</b>	144.9	17.10.2011	14:05	-16.5301	144.4442	9.08	6.91	1.29	1.55	5.42	14	20.01	0.91
	<b>40</b>	149.9	17.10.2011	11:50	-16.5062	144.4179	9.65	6.20	1.85	2.58	3.02	13	30.68	1.30
	<b>39</b>	153.1	17.10.2011	11:42	-16.5144	144.3899	9.38	6.02	1.32	1.57	5.24	14	20.76	0.95
	<b>38</b>	157.9	17.10.2011	11:36	-16.4922	144.3586	8.96	5.26	1.29	1.47	5.32	15	19.01	0.92
	<b>37</b>	164.4	17.10.2011	11:33	-16.4704	144.3106	9.09	5.43	1.30	1.47	5.18	14	20.00	0.86
	<b>36</b>	169.2	17.10.2011	11:29	-16.4755	144.2684	9.20	4.50	1.32	1.57	4.91	15	19.57	0.85
	<b>35</b>	174.7	17.10.2011	11:26	-16.4584	144.2319	9.29	4.97	1.30	1.57	4.72	15	19.37	0.88
	<b>34</b>	178.5	17.10.2011	11:23	-16.4700	144.2029	9.54	5.34	1.32	1.58	4.57	15	20.67	0.89
	<b>33</b>	184.1	17.10.2011	11:19	-16.4980	144.1624	9.72	2.36	1.32	1.60	4.6	16	19.70	0.86
	<b>32</b>	189.7	17.10.2011	11:15	-16.4931	144.1166	9.97	3.66	1.34	1.73	4.45	16	21.24	0.88
	<b>31</b>	193.6	17.10.2011	11:11	-16.4785	144.0856	10.90	8.31	1.36	2.44	5.11	17	32.54	0.92
	<b>30</b>	198.3	17.10.2011	11:07	-16.4576	144.0508	10.70	4.57	1.35	2.48	5.17	17	3.00	0.88
	<b>29</b>	204.4	17.10.2011	11:03	-16.4059	144.0405	10.80	4.79	1.31	2.45	4.92	17	31.65	0.90
	<b>28</b>	208.6	17.10.2011	10:59	-16.3872	144.0102	11.30	5.42	1.29	2.63	4.98	17	34.08	0.92
	<b>27</b>	216.0	17.10.2011	10:55	-16.3646	143.9501	12.40	7.07	1.27	3.71	5.61	17	46.19	0.94
	<b>26</b>	220.7	17.10.2011	10:20	-16.3720	143.9132	12.30	6.52	1.34	4.12	5.87	18	47.60	1.00
	<b>25</b>	225.0	17.10.2011	10:17	-16.3846	143.8781	12.20	6.66	1.30	3.86	5.53	18	44.57	1.10
	<b>24</b>	230.6	17.10.2011	10:13	-16.3837	143.8310	13.00	6.54	1.33	4.36	5.94	17	50.59	1.40
	<b>23</b>	235.5	17.10.2011	10:09	-16.4217	143.8069	13.00	9.61	1.35	4.78	6.3	17	55.61	1.80
	<b>22</b>	240.0	17.10.2011	10:05	-16.4441	143.7775	13.30	6.72	1.32	4.97	7.19	17	56.40	2.40
	<b>21</b>	243.6	17.10.2011	10:00	-16.4673	143.7642	13.10	9.90	1.33	5.03	7.5	16	58.76	3.30
	<b>20</b>	249.7	17.10.2011	09:57	-16.4803	143.7190	15.10	8.75	1.37	5.77	8.76	17	66.54	3.90
<b>Walsh Rv.</b>	<b>19</b>	257.2	17.10.2011	09:52	-16.5381	143.7171	28.80	15.10	2.39	5.72	11.1	15	118.86	26.00
<b>Mitchell Rv.</b>	<b>18</b>	254.6	17.10.2011	09:45	-16.5091	143.6953	15.60	10.30	1.29	5.66	10.0	15	70.71	3.80
	<b>17</b>	260.0	17.10.2011	09:37	-16.5282	143.6715	19.70	9.34	1.49	6.05	11.8	15	92.31	6.70
	<b>16</b>	265.1	17.10.2011	09:33	-16.5154	143.6262	17.90	8.68	1.39	5.82	11.4	14	84.57	5.40
	<b>15</b>	270.5	17.10.2011	09:29	-16.5288	143.5845	17.80	8.88	1.39	5.72	11.4	14	83.40	5.00
	<b>14</b>	275.7	17.10.2011	09:25	-16.5289	143.5382	17.60	9.73	1.42	5.42	11.3	14	79.05	4.70
	<b>13</b>	279.2	17.10.2011	09:22	-16.5181	143.5122	17.30	8.74	1.36	5.2	11.6	13	78.17	4.50
	<b>12</b>	284.4	17.10.2011	09:19	-16.5118	143.4743	17.70	9.73	1.6	4.86	11.1	14	74.79	4.30
	<b>11</b>	290.9	17.10.2011	09:16	-16.5116	143.4362	17.40	8.97	1.36	5.1	11.6	12	77.27	4.10

	<b>10</b>	296.1	17.10.2011	09:13	-16.4968	143.4043	18.00	8.62	1.36	5.32	12.0	13	79.03	4.30	
	<b>9</b>	301.2	17.10.2011	09:10	-16.4904	143.3665	18.00	8.28	1.39	5.26	11.8	13	78.03	3.90	
	<b>8</b>	306.7	17.10.2011	09:00	-16.4637	143.3251	18.20	8.45	1.41	5.39	11.5	13	78.70	4.00	
<b>Lynd Rv.</b>	<b>7</b>	308.6	17.10.2011	08:55	-16.4742	143.3122	35.60	14.00	4.17	38.4	14.9	15	306.52	0.025	
<b>Mitchell Rv.</b>	<b>6</b>	310.6	17.10.2011	08:50	-16.4527	143.2915	24.60	11.60	2.4	19.5	12.7	14	160.49	2.60	
	<b>5</b>	335.0	17.10.2011	08:45	-16.3823	143.1038	26.90	13.60	2.66	23.8	12.3	14	186.08	2.10	
	<b>4</b>	361.5	17.10.2011	08:35	-16.2139	142.9512	26.20	15.10	2.54	22.0	11.4	15	177.20	2.10	
	<b>3</b>	385.1	17.10.2011	08:30	-16.1267	142.7621	26.00	16.10	2.47	19.8	11.1	15	168.32	2.20	
<b>Palmer Rv.</b>	<b>2</b>	393.0	17.10.2011	08:25	-16.0683	142.7786	18.20	9.54	1.04	7.85	11.2	10	92.28	0.74	
<b>Mitchell Rv.</b>	<b>1</b>	400.0	17.10.2011	08:15	-16.0582	142.6529	24.30	13.50	2.25	16.8	10.8	14	152.10	2.10	
<b>Walsh Rv.*</b>	<b>Walsh Up</b>	-	18.10.2011	16:15	-17.1430	145.0955	12.40	6.16	3.42	4.12	7.1	19	43.89	2.60	
<b>Name</b>	<b>ID</b>	<b>Depth (m)</b>	<b>Screen (m)</b>	<b>Sampling (date + time)</b>		<b>Lat.</b>	<b>Lon.</b>	<b>Na<sup>+</sup></b>	<b>Ca<sup>2+</sup></b>	<b>K<sup>+</sup></b>	<b>Mg<sup>+</sup></b>	<b>Si<sup>2+</sup></b>	<b>Cl<sup>-</sup></b>	<b>HCO<sub>3</sub><sup>-</sup></b>	<b>SO<sub>4</sub><sup>2-</sup></b>
<b>Well 1</b>	<b>B.1</b>	~45.0	n.a.	13.10.2011	14:50	-16.5289	145.1364	177	56.80	0.942	44	17.9	340	380.25	78.00
<b>Well 2</b>	<b>B.2</b>	21.9	n.a.	15.10.2011	15:20	-16.7673	145.3504	561	37.50	1.77	61.3	10.9	680	910.24	28.00
<b>Well 58</b>	<b>B.58</b>	29.2	24-29.2	20.10.2011	12:10	-17.1209	145.1180	672	61.60	8.36	65.6	11.7	1100	638.50	91.00
<b>Chillagoe</b>	<b>B.Chill</b>	~70.0	n.a.	20.10.2011	14:55	-17.1534	144.5202	9.99	74.40	1.42	3.78	15.1	23	311.11	8.10
<b>Wrotham Park</b>	<b>B. Wroth</b>	81.0	46-52 75-81	20.10.2011	17:10	-16.6629	143.9974	9.89	8.77	1.77	3.36	2.23	1.7	49.17	17.00